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Better Fruits and Gardens for South Dakota

Letter to the South Dakota State Budget Board from the South Dakota State Horticultural Society

Office of Secretary-Treasurer,
Brookings, S. D., December 14, 1922.

South Dakota State Budget Board
Pierre, South Dakota

Gentlemen:

The headquarters of the South Dakota State Horticultural Society are at the South Dakota State College. For many years the Society has been getting along with an annual appropriation of \$1000. The increase in population and the rising price level makes it very necessary to increase this appropriation. So we are asking an increase to \$1500 annually.

The Society is greatly interested in experimental horticulture in South Dakota, because it is absolutely necessary to real progress.

When I first came to South Dakota in the fall of 1895, the need of a hardier list of orchard and small fruits was very evident. Hence, during the past twenty-seven years, the originating of new fruits has been the special work of this department. Hundreds of thousands of seedlings have been grown. A few of these have attained an honored place on the fruit list in various states. The "Hansen Hybrid" plums are now represented by over one million trees in the orchards of the West, and some say that fully nine-tenths of the plums now sold in the Northwest are the Hansen Hybrid plums. Originating a new fruit corresponds to a new invention in the mechanical industries. This work was started in the special Fruit-breeding greenhouse given to the State College by the State Legislature.

We have now come to where more land is necessary to prevent disaster to the thousands of new seedlings now planted too closely for their proper development. The State of South Dakota should have the largest fruit-breeding farm in the world, because it is necessary to complete the work already planned and to provide for future growth. Such a farm would insure the rapid development of an entirely hardy list of fruits for the prairie Northwest. Will you help realize this, my hope?

The South Dakota State Horticultural Society is back of this proposition and makes the following recommendations:

LAND

South Dakota State College should have the largest fruit-breeding station in the world. It is necessary because of the work already under way. My ambition is to have the work put on a permanent basis so it will go on for generations. Aside from the great intrinsic value of the work, the advertising value to the state will be worth much more than it costs. The total amount of land should be fully one thousand acres. The heart of the work should be at the South Dakota State College, where the work of crossing under glass is conducted and all the foundation stock gathered from

Northern Europe, Siberia, Canada, the Dakotas and all over the prairie Northwest, is now growing. This is a unique collection. This foundation material is essential. I have made eight trips to Canada in the past four years gathering more material as far north as possible, in order to get an excess of hardiness and earliness to work upon with the various fruits. A section of school land as near the State Capitol at Pierre as possible should be set aside to be used as an upland station where the work with the South Dakota Sand Cherry and other fruits that favor the uplands can best be conducted. This upland station will also give opportunity for the work with some of the forage plants which I obtained in Siberia, especially the alfalfas, of which recently over eighty pounds of seed was raised at Rampart, Alaska, sixty-five miles this side of the Arctic Circle when all other winter killed. Some special selection work is needed with these new alfalfas. South Dakota should be the center of hardy alfalfa seed production and the center of this new development work for all the prairie Northwest from here to the Arctic Circle. This would also afford opportunity for Director James W. Wilson to continue on an adequate scale the great work he is doing with the Siberian Fat-rumped Sheep, which I brought from Siberia in 1913, and which will be worth many millions of dollars to South Dakota.

STATE ORCHARDS

In addition to this upland station at Pierre, we need a series of state orchards located as near to some of the largest cities as possible, so that plenty of help will be available at times when needed. Allowing for the difference in climate, my first thought of this would be Sioux Falls, Watertown, Rapid City, Yankton and Aberdeen. Also more land at Brookings is absolutely necessary. Smaller orchards could be located elsewhere on a co-operative rental basis. I am confident that other cities and towns would be willing to give 40 acres for such purpose, providing the State would do the rest. In addition to this there should be a model fruit and ornamental plantation on the State Fair Grounds at Huron. In this way we would quickly learn the comparative value of any new variety for the various parts of the State. South Dakota is such a large state that several stations are absolutely needed. These state orchards would need one resident superintendent to keep the seedlings clean and to give them good cultivation; the selection and crossing work to be done by myself and assistants. The plan would include:

1. To test all the standard varieties.
2. To demonstrate the best systems of orchard management.
3. To test out many thousands of new seedlings which I am originating every year.
4. To establish stock orchards, especially for the Siberian wild blight-proof pears and wild apples, to grow hardy seedlings upon which to bud the new hybrids coming on.

This will be a permanent proposition. There will be some income from the sale of the seedlings to nurserymen, also from the sale of fruit.

EARLY BEARING APPLES

A most remarkable variety, the Anoka, has resulted from my work with over 10,000 apple seedlings along many lines of pedigree. One year old Anoka trees sent to Fargo in 1920, bore freely in 1922, one tree yielding 26 and another 23 good sized fruits. This is a step forward in my project of having apple trees bear fruit as early as plum trees. My hope is to develop a series of hardy choice blight-proof winter apples for the prairie Northwest. My ideal apple is not yet here but I am sure it is on the way. The wild American crab apple is being tamed successfully and four varieties were distributed last spring.

BLIGHT-PROOF PEARS

Pears are a general failure in the prairie Northwest either from fire blight or winter killing. The only pears surviving from a host of varieties under test are some wild east Siberian pears. These are hardy, resistant to blight, and bear fruit by the bushel. Already I have some promising hybrids coming on with choice cultivated pears. To get pollen for these experiments I went to Arkansas and southern Missouri. This work should be followed up with all possible speed.

THE LARGEST PLUM

The largest plum in successful cultivation in the Northwest is my Waneta, a native and Japanese plum hybrid, the largest of ten thousand seedlings. It shows that large numbers are necessary for the best results. Three of my most recent plums, hybrids of the Manitoba wild plum with Japanese plums, are now attracting much attention.

DEVELOPING HARDY CHERRIES

The ideal hardy cherry has not yet appeared, although I have strong hopes in that line. But my black-fleshed Sand Cherry hybrid, the Sapa, is an acceptable substitute, in the opinion of many. And the Sapa and my other hybrids of the native Sand Cherry of western South Dakota with Japanese plums, are very popular over a wide area of the West and up into Canada because of their remarkable faculty of bearing on one year old wood.

GRAPES

Some wonderful new hybrid grapes derived from the wild grape of North Dakota have fruited the past three years at this Station. Some of my best new seedlings fruited for the first time this year and were exhibited at the State Fair at Huron. Extensive vineyards should now be established so as to propagate these new seedlings as quickly as possible. They are superior to anything now in cultivation for the Dakotas.

RASPBERRIES

Out of 13,000 seedlings of wild raspberries crossed with the tame raspberries, I have named two, the Sunbeam and Olta, which are the hardiest varieties now in cultivation. We need to extend this work largely and get still better ones from the new material recently obtained.

LARGER GOOSEBERRIES

Our present gooseberries are too small. By crossing the English gooseberries, the largest in the world, with South Dakota wild gooseberries, I now have a lot of splendid hybrids that are very hardy and prolific, with fruit of large size and excellent quality. But more land is needed for their propagation.

HARDIER STRAWBERRIES

The best of 10,000 seedlings of wild strawberry pedigree, my South Dakota, although only one inch in diameter, stands out as the only variety hardy without winter protection. Lack of land has prevented further work.

HARDY ORNAMENTALS

I am not unmindful of the need of hardier ornamental shrubs, especially roses. Out of many thousands of new seedling roses, I have named one, the Tetonkaha, which is quite popular. We have

some better ones coming on. The wild roses of the Dakotas and prairie Northwest and also of Siberia are being improved to approximate the American Beauty standard. It may take half a million seedlings to complete this work but it is worth doing. It can be done in connection with the fruit stations.

MONEY

The progress of this work will depend upon the amount of money given us. I would suggest \$25,000 per year, or as much thereof as possible, also the income from the annual crop of fruit, seed and seedlings from these stations to help in the work. A small amount of this money should be available for a small station of a few acres in some far southern state where a lot of special varieties could be grown to furnish an abundance of pollen needed. This could be done economically on a rental basis. Similar provision should also be made for a few acres on a rental basis in some far northern locality, so as to extend the blooming season and thus save many years of work. Many thousands more of blossoms could be worked each year.

BUILDINGS

We need a cellar and cold storage building with fruit-breeding greenhouse and fruit laboratory in connection. About \$20,000.00 would give us this necessary equipment. This would be at the State College. However, as soon as possible a similar building should be erected at other places, say at Sioux Falls, as it would afford steadier employment during the year for the labor needed and very greatly hasten the work.

FINALLY

My new varieties already on the accepted fruit lists of the Northwest show what I have done so far. My five tours to Russia have given me a vision as to what should be done next.

All this is not a personal matter with me, but new idea men in horticulture are scarce. I hope you will aid the South Dakota State Horticultural Society in getting this work put on a permanent basis so it will go on for a hundred years after I have passed on.

At these different state orchards special field days would be held annually. I would expect many thousands of visitors during the year at these meetings. They will believe an orchard in full bearing, much more than they will believe a bulletin. Seeing is believing.

You may say money is scarce, and yet England and France, in spite of great financial stress, have increased their budgets for agricultural research. This is because it pays. Agricultural research adds to the national wealth.

N. E. Hansen, Professor of Horticulture, South Dakota State College, and Secretary South Dakota State Horticultural Society.